*iso*Lynx™ SLX100/101 Quick Start Guide

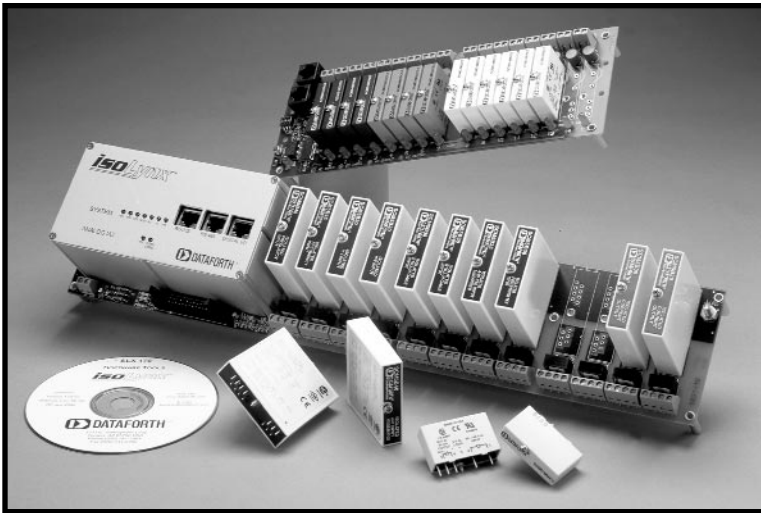**DATAFORTH®**

Table of Contents

isoLynx™ Analog I/O Base Unit

1.1 Unpacking

Each isoLynx™ Analog I/O Base Unit is shipped in electro-static discharge (ESD) protective packaging. Use appropriate ESD protection measures while unpacking. Check visually for physical damage. If physical damage is noted, file a claim with the shipping carrier.

1.2 Package Contents and Physical Description

isoLynx™ SLX100 Analog I/O Base Unit comprised of:

- isoLynx™ Controller (containing one processor board, one I/O signal converter board, and one optional industrial communication board) mounted on the 12 ch. Analog I/O Base Unit backpanel.

- One CD-ROM containing isoLynx™ data acquisition software drivers/examples and documentation files including: Help files, manuals, and specifications.

- This **isoLynx™ SLX100/101 Quick Start Guide.**

This completes the unpacking and visual inspection of the isoLynx™ Analog I/O Base Unit.

For detailed configuration and installation in your system, reference the isoLynx™ Hardware User Manual and/or the isoLynx™ Software User Manual on CD-ROM.

For rapid verification of basic functionality, continue with the next section.

1.3 Verifying Basic Operation

At this point you are ready to insert an SCM5B module, connect an input signal, and apply power to the isoLynx™ Analog I/O Base Unit in order to verify its basic operation.

1.3.1 Hardware Configuration

Install any SCM5B input module in any channel position 0 through 11. Connect an appropriate sensor or calibration signal source to the field I/O connectors on the backpanel in front of the module (refer to figure 1.1 for I/O connection diagram). The isoLynx™ Analog I/O Base Unit will demonstrate basic operation without any modules installed as long as at least one input channel is configured.

Install an SLX140-X cable (RJ45 both ends) and an SLX142-X or SLX143-X RJ-45 to DB-9 adapter (either factory preset or user configurable) between the isoLynx™ Analog I/O Base Unit RS-232 port (RJ-45) and a PC serial port (DB-9). See Figure 1.1. From the factory, all units are shipped configured for RS-232, 9600 bits/second (Baud) interface.

Connect a +5VDC 1 Amp (minimum) power supply and turn on the power. Observe the +5V LEDs lighting. Observe that RD and TD LEDs are off. Observe the A/D LED blinking at a steady rate after an initial pause. For location of LEDs, see Figure 1.1.

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1.3.2 Using PC Sample Software

Create the C:\Program Files\Dataforth\isoLynx folder on your local hard drive. From the installation CD-ROM, copy the Demo folder and all of its contents to the folder you just created.

1.3.2.1 Minimum PC Requirements

Windows 98, ME, 2000, or XP and the minimum hardware to support the operating system.

1.3.2.2 Configuring an Input Channel

From the Demo folder run the isoLynx™ Configuration sample program Config.exe. Config will display a dialog box similar to Figure 1.2. Figure 1.2 shows the Configuration Sample dialog box as it appears after configuration, so some information and labels may have changed from the initial states.

(1) The button at the top right corner is labeled **Connect** or **Disconnect.** For information on the other options in this section, see the isoLynx™ Software User Manual. Clicking on **Connect** displays an isoLynx™ Connect dialog box. Clicking on **Connect** within that box triggers the Config program to make a serial connection to the isoLynx™ Analog I/O Base Unit. For information on the other options in the isoLynx™ Connect dialog box, see the isoLynx™ Software User Manual. After a short pause, the Connect dialog box disappears and the **Connect** button in the Configuration dialog box shows **Disconnect.**

(2) At this time, observe the information boxes in the I/F Configuration section are displaying the communication parameters, in particular, Baudrate: 9600 and Interface Type: RS-232. For information on the other options in this section, see the isoLynx™ Software User Manual.

(3) Observe the I/O Type boxes in the I/O configuration section have become activated. Observe the box labeled I/O Panel shows the designation: Aio.0, meaning: Analog I/O Panel 0. For information on the other options in this section, see the isoLynx™ Software User Manual.

(4) Click on the down arrow button of the I/O Type box next to the channel you have populated with a module. Select Ai from the pull down list. Note the Channel Present box now has a check mark.

(5) Click on the **Configure** button in the bottom right corner to send isoLynx™ its new configuration. Click **Yes** in the I/O Configure question box. After a short communication pause, the isoLynx™ Analog I/O Base Unit is now configured.

(6) Before running the Input sample program, you must **Disconnect** the Configure sample program. The example in Figure 1.2 has configured panel 0, channel 0. At this time, you may also click on ▬ to minimize or **X** to close the Configuration dialog box.
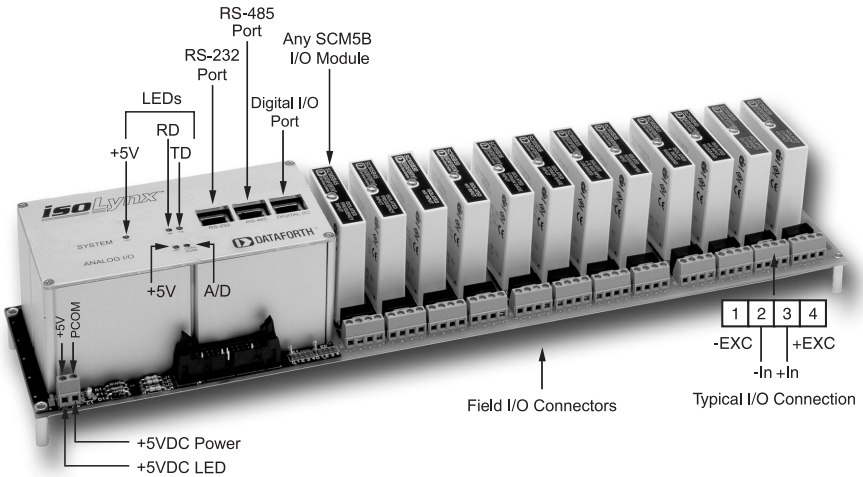
isoLynx™ Analog I/O Base Unit

Figure 1.1

1.3.2.3 Reading an Input Channel

Next locate and run the Input sample program Input.exe. Input will display a dialog box similar to Figure 1.3. Figure 1.3 shows the Input Sample dialog box as it appears after execution, so some information and labels may have changed from the initial states.

(1) The button at the top right corner is labeled **Connect** or **Disconnect.** For information on the other options in this section, see the isoLynx™ Software User Manual. Clicking on **Connect** displays an isoLynx™ Connect dialog box. Clicking on **Connect** within that box triggers the Input program to make a serial connection to the isoLynx™ Analog I/O Base Unit. For information on the other options in the isoLynx™ Connect dialog box, see the isoLynx™ Software User Manual. After a short pause, the Connect dialog box disappears and the **Connect** button in the Input dialog box shows **Disconnect.**

(2) At this time observe in the Channel Data section that the channel you have configured has a check mark. All others are blank.

(3) Note in the Channel Options section, the I/O Panel box contains the designation: Aio.0. There are four selection boxes. All have check marks. The recommended configuration is: leave Read Group checked, uncheck Stop On Error, leave Floating-Point Data checked and uncheck Average Data. For the meanings and implications of the other choices, see the isoLynx™ Software User Manual.
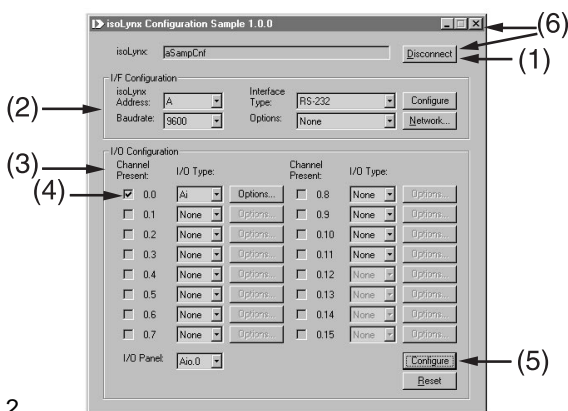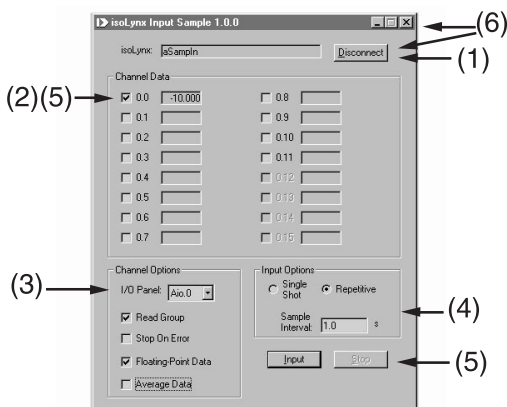
Figure 1.2

Figure 1.3

(4) In the Input Options section, there are three choices: Single Shot, Repetitive and Sample Interval. For a dynamic display, choose Repetitive. Sample Interval can range from 0.05 to 65.50 seconds.

(5) Clicking on the **Input** button will start data acquisition. Observe either the signal you have connected or a random noise signal from the open analog input as a varying decimal number next to the configured channel. The example in Figure 1.3 shows data for panel 0, channel 0. Click on the **Stop** button to stop data acquisition.

(6) Click on **Disconnect**, then **X** to end this demo.

1.3.3 Using isoLynx™ Commands Directly

Alternatively, you may use a terminal program, such as Hyperterminal in Win9x or later or Terminal in Win3.1 to key in configure and input read commands. Reference the isoLynx™ Software User Manual.

isoLynx™ Digital I/O Backpanel

2.1 Unpacking

Each isoLynx™ Digital I/O Backpanel is shipped in electro-static discharge (ESD) protective packaging. Use appropriate ESD protection measures while unpacking. Check visually for physical damage. If physical damage is noted, file a claim with the shipping carrier.

2.2 Package Contents and Physical Description

- isoLynx™ SLX101 Digital I/O Backpanel, two high speed serial I/O ports and 16 digital I/O channel module sockets.

- One CD-ROM containing isoLynx™ data acquisition software drivers/examples and documentation files including: Help files, manuals, and specifications.

- This **isoLynx™ Digital I/O Backpanel Quick Start Guide.**

This completes the unpacking and visual inspection of the isoLynx™ Digital I/O Backpanel.

The scope of the **isoLynx™ Digital I/O Backpanel Quick Start Guide** covers rapid verification of the isoLynx™ Digital I/O Backpanel connected to an isoLynx™ Analog I/O Base Unit only. For detailed configuration and installation in your system and for stand-alone operation, reference the isoLynx™ Hardware User Manual and/or the isoLynx™ Software User Manual on CD-ROM.

For rapid verification of basic functionality, continue with the next section.

2.3 Verifying Basic Operation

At this point you are ready to insert an SCMD module, connect an external signal, connect communications to the isoLynx™ Analog I/O Base Unit, and apply power to both the isoLynx™ Analog I/O Base Unit and isoLynx™ Digital I/O Backpanel, and verify the system's basic operation as follows:

2.3.1 Hardware Configuration

Install any SCMD input module in any channel position 0 through 15. Connect an appropriate discrete digital signal to the field I/O connectors (note: odd numbered screw terminals are + connection) on the backpanel behind the module. See Figure 2.1. The isoLynx™ Digital I/O Backpanel will demonstrate basic operation without any modules installed as long as at least one input channel is configured.

Install an SLX140-X cable (RJ45 both ends) between the isoLynx™ Analog I/O Base Unit Digital I/O port (RJ-45) and one of the two RJ-45 Digital I/O ports on the isoLynx™ Digital I/O Backpanel. These two ports are wired in parallel to allow chaining of multiple isoLynx™ Digital I/O Backpanels, so it is not critical which one is used. See Figure 2.1. See **isoLynx™ Analog I/O Base Unit Section 1.3.1** for isoLynx™ to PC connection.

Connect a +5VDC 1 Amp (minimum) power supply and turn on the power. Observe the +5V LED lighting. Channel LEDs for populated channels may be on or off depending on the state of the input. Channel LEDs for vacant channels will remain off. For location of LEDs, see Figure 2.1.

2.3.2 Using PC Sample Software

Create the C:\Program Files\Dataforth\isoLynx folder on your local hard drive. From the installation CD-ROM, copy the Demo folder and all of its contents to the folder you just created.

2.3.2.1 Configuring an Input Channel

From the Demo folder run the isoLynx™ Configuration sample program Config.exe. Config will display a dialog box similar to Figure 2.2. Figure 2.2 shows the Configuration Sample dialog box as it appears after configuration, so some information and labels may have changed from the initial states.

(1) The button at the top right corner is labeled **Connect** or **Disconnect**. For information on the other options in this section, see the isoLynx™ Software User Manual. Clicking on **Connect** displays an isoLynx™ Connect dialog box. Clicking on **Connect** within that box triggers the Config program to make a serial connection to the isoLynx™ Digital I/O Backpanel. For information on the other options in the isoLynx™ Connect dialog box, see the isoLynx™ Software User Manual. After a short pause, the Connect dialog box disappears and the **Connect** button in the Configuration dialog box shows **Disconnect**.

(2) At this time, observe the information boxes in the I/F Configuration section are displaying the communication parameters, in particular, Baudrate: 9600 and Interface Type: RS-232. For information on the other options in this section, see the isoLynx™ Software User Manual.

(3) Observe the I/O Type boxes in the I/O configuration section have become activated. Observe the box labeled I/O Panel shows the designation Aio.0, meaning: Analog I/O Panel 0. Click on the down arrow button of the I/O Panel box. Click on Dio.0, meaning: Digital I/O Panel 0, in the selection list. For information on the other options in this section, see the isoLynx™ Software User Manual.

(4) Click on the down arrow button of the I/O Type box next to the channel you have populated with a module. Select Di from the pull down list. Note the Channel Present box now has a check mark.
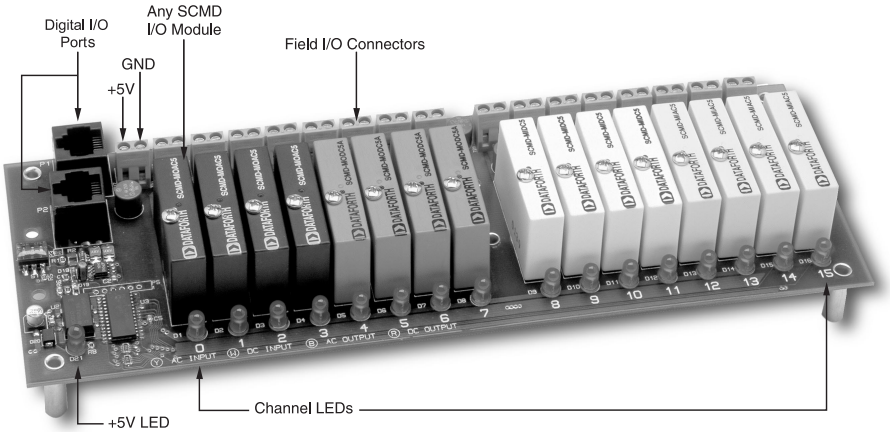
isoLynx™ Digital I/O Panel

Figure 2.1

(5) Click on the **Configure** button in the bottom right corner to send isoLynx™ its new configuration. Click **Yes** in the I/O Configure question box. After a short communication pause, the isoLynx™ Digital I/O Backpanel 0 is now configured and communicating with the isoLynx™ Analog I/O Base Unit.

(6) Before running the Input sample program, you must **Disconnect** the Configure sample program. The example in Figure 2.2 has configured panel 0, channel 0. At this time, you may also click on ▬ to minimize or **X** to close the Configuration dialog box.

2.3.2.2 Reading an Input Channel

Next locate and run the Input sample program Input.exe. Input will display a dialog box similar to Figure 2.3. Figure 2.3 shows the Input Sample dialog box as it appears after execution, so some information and labels may have changed from the initial states.
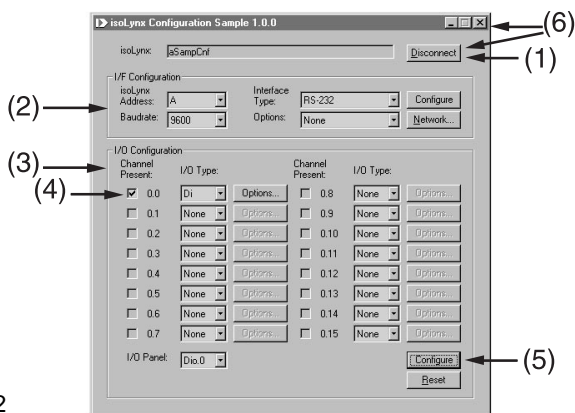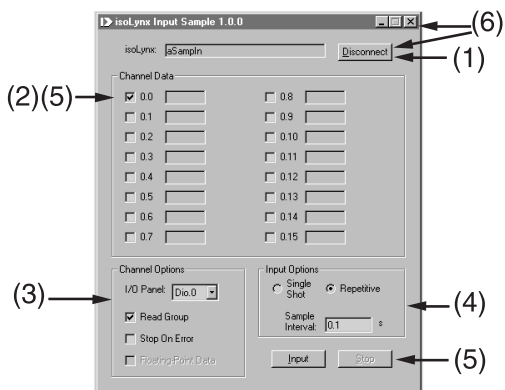
Figure 2.2

Figure 2.3

(1) The button at the top right corner is labeled **Connect** or **Disconnect**. For information on the other options in this section, see the isoLynx™ Software User Manual. Clicking on **Connect** displays an isoLynx™ Connect dialog box. Clicking on **Connect** within that box triggers the <u>Input</u> program to make a serial connection to the isoLynx Digital I/O Backpanel. For information on the other options in the isoLynx™ Connect dialog box, see the isoLynx™ Software User Manual. After a short pause, the Connect dialog box disappears and the **Connect** button in the Input dialog box shows **Disconnect**.

(2) At this time observe in the Channel Data section the channel you have configured has a check mark. All others are blank.

(3) Note in the Channel Options section, the I/O Panel box as in Configure contains the designation: Dio.0. There are four selection boxes, two have check marks and two are de-activated. The recommended configuration is: Leave Read Group checked and uncheck Stop On Error. Floating-Point Data and Average Data is de-activated for digital panels. For the meanings and implications of the other choices, see the isoLynx™ Software User Manual.

(4) In the Input Options section, there are three choices: Single Shot, Repetitive, and Sample Interval. For a dynamic display, choose Repetitive. Sample Interval can range from 0.05 to 65.50 seconds.

(5) Clicking on the **Input** button will start data acquisition. Observe either the signal you have connected or a constant 1 or 0 next to the configured channel. The example in Figure 2.3 shows data for panel 0, channel 0. Click on the **Stop** button to stop data acquisition.

(6) Click on **Disconnect**, then **X** to end this demo.

2.3.3 Using isoLynx™ Commands Directly

Alternatively, you may use a terminal program, such as Hyperterminal in Win9x or later or Terminal in Win3.1 to key in configure and input read commands. Reference the isoLynx™ Software User Manual.

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Warranty Procedures. Buyer shall notify Seller of any products which it believes to be defective during the applicable warranty period and which are covered by the warranty set forth above. Buyer shall not return any products for any reason without the prior authorization of Seller and issuance of a Return Material Authorization number. After issuance of an RMA number, such products shall be promptly returned by Buyer (and in no event later than thirty (30) days after the warranty expiration date), transportation and insurance prepaid, to the Seller's designated facility for examination and testing. Seller shall either repair or replace any such products found to be so defective and promptly return such products to Buyer, transportation and insurance prepaid. Should Seller's examination and testing not disclose any defect covered by the foregoing warranty, Seller shall so advise Buyer and dispose of or return the products in accordance with Buyer's instructions and at Buyer's sole expense, and Buyer shall reimburse Seller for testing expenses incurred at Seller's then current repair rates.

Repair Warranty. Seller warrants its repair work and/or replacement parts for a period of ninety (90) days from receipt by Buyer of the repaired or replaced products or for the remainder of the warranty period for the initial delivery of such order as set forth above in paragraph a, whichever is greater.

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Application Support. Dataforth provides timely, high-quality product support. Just call **1-800-444-7644** TOLL-FREE (USA)

Returns/Repair Policy. All warranty and repair requests should be directed to the Dataforth Customer Service Department at (520) 741-1404. If a product return is required, request a Return Material Authorization (RMA) number. You should be ready to provide the following information:

1. Complete product model number.
2. Product serial number.
3. Name, address, and telephone number of person returning product.
4. Special repair instructions.
5. Purchase order number for out-of-warranty repairs.

The product should be carefully packaged, making sure the RMA number appears on the outside of the package, and ship prepaid to:

Dataforth Corporation
3331 E. Hemisphere Loop   **Phone: 520-741-1404**
Tucson, AZ 85706 USA   **FAX: 520-741-0762**

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